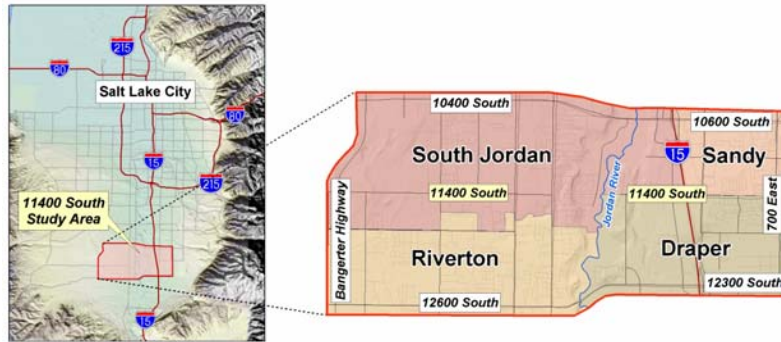


## Executive Summary

This Final Environmental Impact Statement (FEIS)/Final Section 4(f) Evaluation presents the environmental consequences of proposed improvements to the transportation network in southern Salt Lake Valley. Current as well as future traffic congestion has been identified as an issue in the study area, which consists of the area bounded by 12300/12600 South to 10400/10600 South, and Bangerter Highway to 700 East, as shown in the figure below.



### Study Area in Relation to Salt Lake Valley

Five transportation alternatives, including the No Build Alternative, were advanced and have been evaluated in this FEIS. The Build Alternatives include various combinations of the following actions: making improvements to existing roadways at 10400/10600 South, 11400 South, and/or 12300/12600 South; constructing a new bridge and connecting the 11400 South roadway over the Jordan River; and constructing a new freeway interchange at 11400 South and I-15.

In 2000, the Utah Department of Transportation (UDOT) and FHWA completed an Environmental Assessment (EA) for the 11400 South Interchange and Roadway Improvements Project.

Based on the EA, FHWA issued a Finding of No Significant Impact (FONSI), which allowed the interchange and roadway improvements project to proceed.

Legal action to enjoin the project was filed in Utah's U.S. District Court. In 2001, the U.S. District Court denied the plaintiffs' motion for a preliminary injunction [*Davis v. Slater*, 148 F. Supp. 2d 1195 (D. Utah 2001)]. The decision was appealed to the 10th Circuit Court of Appeals. During this appeal, the scope of the transportation needs in the project area changed and therefore UDOT, in consultation with FHWA, decided to withdraw the EA's FONSI and prepare an Environmental Impact Statement (EIS) for a larger project. Mobilization for project construction had started prior to the official approval by FHWA to withdraw the FONSI. The official approval by FHWA to withdraw the FONSI came the morning of the day the 10th Circuit Court of Appeals issued its decision – although the request by UDOT for FHWA to take this action came weeks before.

Notwithstanding FHWA's withdrawal of the FONSI such that there was no longer a valid project, the 10th Circuit Court of Appeals ruled against FHWA and identified the following deficiencies in the environmental document:

- The consideration of alternatives was inadequate;
- Impacts, including cumulative impacts, were not considered adequately;
- Issues related to phasing of the project were not adequately addressed;
- Section 4(f) analysis failed to satisfy the high burden imposed by a project that made use of a public park and/or historic sites; and

- The environmental document analysis was fatally flawed by its use of vague, unsupported conclusions and inadequate, incomplete analysis.

In the EIS for the new project, UDOT and FHWA agreed to address these deficiencies, including a more detailed study of the transportation issues and alternatives in an area wider than just the 11400 South corridor. UDOT and FHWA also prepared a new Section 4(f) Evaluation which is included in this FEIS. Specifically, the FEIS/Section 4(f) Evaluation:

- (1) considers 12 initial alternatives in an expanded study area which were screened down to five alternatives advanced for detailed analysis;
- (2) thoroughly addresses direct, indirect, and cumulative impacts from the five alternatives advanced for detailed analysis;
- (3) identifies mobility, community, and environmental impacts related to construction phasing of the advanced alternatives;
- (4) identifies all potentially impacted Section 4(f) resources within the study area, potential impacts to and uses of those resources from each advanced alternative, and measures to avoid, minimize, or mitigate those impacts; and identifies as the Preferred Alternative the alternative with the least overall net harm to Section 4(f) resources; and
- (5) provides detailed, comprehensive analysis and conclusions, with supporting documentation included in the FEIS appendices and administrative record.

## ***Summary of Purpose and Need***

The southern Salt Lake Valley is one of the fastest growing areas in the state of Utah. The project study area includes portions of Draper, Riverton, Sandy, and South Jordan cities. Total population within these four cities is expected to increase by 90 percent by the year 2030 over 2000 population numbers (State of Utah Governor's Office of Planning and Budget 2003).

With the large growth in population and associated economic development, travel demand will increase. The study of existing traffic conditions and future projected traffic conditions conducted for this FEIS shows not only existing transportation problems, but also future congestion problems that will occur if no additional transportation improvements are made in the 11400 South study area.

Transportation's role in economic development can be evaluated by first understanding the role future development plays in creating and meeting local government's fiscal needs and then assessing the reliance of future development on expanded transportation capacities, networks, or systems. The transportation improvements that increase highway capacity result in increased visibility and access that can directly affect a business' success.

Maintaining the current quality of life is important to the cities and the residents within the study area. This quality of life includes neighborhood-style communities in which residents know their neighbors, live in rural and suburban neighborhoods, have access to family recreation such as parks and trails, and have convenient access to work, services, and stores.

In order to maintain, protect, and improve the quality of life, now and into the future, the residents and government officials of the cities within the study area have identified the following **needs**.

### **1. Mobility within the study area needs to be improved.**

A traffic analysis of current conditions within the study area was conducted and modeling of future traffic conditions through 2030 was completed. These studies show that there are three major intersections and two interchanges within the study area that currently operate at or over capacity during the afternoon rush hour (4:00 pm to 6:00 pm), and one interchange that operates at or over capacity during both the morning (7:00 am to 9:00 am) and afternoon rush hours. By 2030, ten major intersections and two interchanges within the study area are expected to be at or over capacity during morning and/or afternoon rush hours (see Section 1, Table 1-2 and Figure 1-5). This congestion is expected to cause difficulties and delays in commuting to work and traveling to local destinations, as well as reductions in emergency service response times, all resulting in adverse impacts to quality of life.

### **2. Economic development within the study area needs to continue in order for cities to maintain the quality of life their residents desire.**

According to officials of the four cities within the study area, continued economic development, both business and residential, is necessary to provide additional employment, housing, and adequate access to goods and services for current and future residents within the study area and is vital to the future success of their cities. In addition, the increased sales tax revenue is needed to allow cities to continue providing the necessary public services and quality of life enhancements to the growing residential population.

The **purpose** of the project is to maintain, protect, and improve the quality of life in the study area by improving mobility and providing transportation infrastructure to support economic development within the study area through the year 2030. This is

consistent with both federal and state transportation planning requirements.

### **Summary of Alternatives**

The study area is located approximately 16 miles south of the center of Salt Lake City in Salt Lake County. It encompasses portions of Draper, Riverton, Sandy, and South Jordan. All land within the study area is incorporated into one of the four cities. The area is considered suburban to Salt Lake City, with many residents commuting north to Salt Lake City to work. Interstate 15 is the primary north-south route in the area, with Bangerter Highway, Redwood Road, State Street, and 700 East providing secondary north-south access as signalized arterials. The major east-west access roads within the study area, from north to south, are 10400 South/10600 South, portions of 11400 South, portions of 11800 South, and 12300/12600 South. Currently, only 10400 South/10600 South and 12300 South/12600 South have interchanges at I-15 within the study area, and provide the two Jordan River crossings.

A broad array of alternatives was initially considered to address the goals and objectives contained in the purpose and need statement for the 11400 South EIS Project. Initial transportation options were considered, then refined into preliminary alternatives. These preliminary alternatives were screened through a two-tier process, with alternatives that met the screening criteria carried forward, and alternatives that did not meet the screening criteria eliminated from further consideration.

The final result of the screening process was four "Build" Alternatives recommended for further detailed analysis. The No Build Alternative was also carried through the process to provide a baseline, as required by the National Environmental Policy Act

(NEPA). A Preferred Alternative was identified in the FEIS after detailed analysis of these final five alternatives.

### **No Build Alternative**

The No Build Alternative is defined as no new major construction within the study area, other than projects that are already in the Wasatch Front Regional Council (WFRC) Long Range Plan (LRP). Minor spot improvements or signal projects may be constructed under the No Build Alternative. The LRP Phase 1 improvements are scheduled to occur between 2004 and 2012, Phase 2 improvements are scheduled between 2013 and 2022, and Phase 3 improvements are scheduled between 2023 and 2030. The projects identified in the WFRC LRP include:

1. Widen 12300/12600 to four lanes\* from Bangerter Highway to 700 East (LRP Phase 1 – construction complete).
2. Widen 10400/10600 South to four lanes\* from Bangerter Highway to Redwood Road (LRP Phase 1).
3. Widen Redwood Road to four lanes \* from Bangerter Highway to 10400 South (LRP Phase 1).
4. Widen I-15 to 10 lanes from 10600 South to the Alpine Exit (LRP Phase 1 through Phase 3 – construction complete from 10600 South to Point of the Mountain).
5. Widen 700 East to four lanes\* from 12300 South to 9400 South (LRP Phase 1).
6. Widen State Street to four lanes\* south of 11400 South (LRP Phase 1).
7. Widen State Street to six lanes\* north of 11400 South (LRP Phase 1).
8. New Mountain View Corridor Transportation Route six lane facility (LRP Phase 1 through Phase 3).
9. Draper Extension of the existing light rail line (LRP Phase 2).

10. Mid Jordan light rail line extension (LRP Phase 1).
11. Commuter rail line from Utah County to Weber County (LRP Phase 1).
12. Widen 11400 South to four lanes\* from I-15 to 700 East (LRP Phase 1).
13. Redwood Road Bus Rapid Transit (BRT) line from 14400 South to 8000 South (LRP Phase 2).
14. Mountain View Corridor BRT line from 13400 South to 4700 South (LRP Phase 2).
15. Widen 12600 South to four lanes\* from Bangerter Highway to SR-111 (LRP Phase 3).
16. Widen 10400 South to four lanes\* from Bangerter Highway to SR-111 (LRP Phase 2)

\* Plus an additional center turn lane or median.

The No Build Alternative also includes the following Transportation Management (TM) measures that are identified in the WFRC Long-Range Plan:

- New bus service within the corridor including Bangerter Highway, 10400/10600 South, 11400 South, and 12300/12600 South;
- Increased bus service within the corridor, including high frequency routes along 10400/10600 South, 3700 West, Redwood Road, Lone Peak Parkway, Jordan Gateway, State Street, and 700 East;
- New/additional bus park-and-ride lots along Redwood Road at 11100 South and 12300 South and at 10600 South and State Street, and a new light rail park-and-ride lot near 1300 East and 12300 South; and

- New HOV lanes on I-15 from 10600 South through the project area.

#### **Alternative 1**

Alternative 1 consists of widening 12300 South and 10600 South to six lanes and adding a new river crossing at 11400 South. In addition to the projects and TM measures identified under the No Build Alternative, Alternative 1 includes the following components:

- Widen 10400/10600 South to six lanes\* from Bangerter Highway to Jordan Gateway.
- Widen 12300/12600 South to six lanes\* from Bangerter Highway to Lone Peak Parkway.
- Add a river crossing at 11400 South, and widen 11400 South to four lanes.\*
- Add I-15 underpass at 11000 South, and extend 11000 South to the west to Jordan Gateway.
- Add I-15 overpass at 11800 South, and extend 11800 South to the west to Lone Peak Parkway.
- Modifications to I-15 interchange at 10600 South – triple left turn lanes for southbound to eastbound traffic.
- Widen State Street to six lanes\* from 12300 South to 11400 South.

\* Plus an additional center turn lane or median.

#### **Alternative 3A**

Similar to Alternative 1, Alternative 3A consists of widening 12300 South and 10600 South to six lanes, but there would be no new river crossing at 11400 South. In addition to the projects and TM measures identified under the No Build Alternative, Alternative 3A includes the following components:

- Widen 10400/10600 South to six lanes\* from Bangerter Highway to Jordan Gateway.

- Widen 12300/12600 South to six lanes\* from Bangerter Highway to Lone Peak Parkway.
- Modifications to I-15 interchange at 10600 South – triple left turn lanes for southbound to eastbound traffic.
- Add I-15 underpass at 11000 South, and extend 11000 South to the west to Jordan Gateway.
- Add I-15 overpass at 11800 South, and extend 11800 to the west to Lone Peak Parkway.
- Widen Jordan Gateway to six lanes\* from 10600 South to 12300 South.

\* Plus an additional center turn lane or median.

#### **Alternative 4**

Alternative 4 includes a new I-15 interchange and a new river crossing at 11400 South, and widening 10600 South to six lanes from just west of River Front Parkway to Jordan Gateway. In addition to the projects and TM measures identified under the No Build Alternative, Alternative 4 includes the following components:

- Add an interchange at 11400 South and I-15, with an auxiliary lane on I-15 northbound and I-15 southbound between 11400 South and 10600 South.
- Add a river crossing at 11400 South and widen 11400 South to four lanes\* from Bangerter Highway to State Street.
- Intersection improvements at 11400 South and Bangerter Highway.
- Intersection improvements on Jordan Gateway/Lone Peak Parkway at 10600 South, 11400 South and 12300 South.
- Modifications to I-15 interchange at 10600 South – triple left turn lanes for southbound to eastbound traffic.
- Widen 10600 South to six lanes\* from just west of River Front Parkway to Jordan Gateway.

\* Plus an additional center turn lane or median

### **Alternative 7**

Alternative 7 consists of a new river crossing at 11400 South, widening 10600 South to six lanes from I-15 to just west of Redwood Road, and widening Jordan Gateway/Lone Peak Parkway to six lanes. In addition to the projects and TM measures identified under the No Build Alternative, Alternative 7 includes the following components:

- A. Extend 11400 South across the Jordan River and widen 11400 South to four lanes from Bangerter Highway to State Street.
- B. Intersection improvements at 11400 South and Bangerter Highway.
- C. Widen 10600 South to six lanes from Redwood Road to Jordan Gateway.
- D. Widen Jordan Gateway/Lone Peak Parkway to six lanes\* from 12300 South to 10600 South.
- E. Modifications to I-15 interchange at 10600 South – triple left turn lanes for southbound to eastbound traffic.

\* Plus an additional center turn lane or median

### **Identification of the Preferred Alternative**

Selection of the recommended Preferred Alternative was based on a comparison of all the alternatives advanced for detailed study in terms of mobility improvements and environmental, social, and economic impacts. In addition, the project team considered public and resource agency input and city council recommendations or resolutions regarding the project. Table ES-1 on the following page summarizes the impacts of each alternative.

Although the No Build Alternative had the least overall environmental impacts, it did not meet the project purpose and need for improving mobility and providing the transportation infrastructure to support economic development within the study

area through the year 2030. Therefore, it was not recommended as the Preferred Alternative.

Based on Section 4(f) evaluation conducted for this FEIS, there is no feasible and prudent alternative that will avoid all Section 4(f) resources. All four of the Build Alternatives will directly use both recreational and historic Section 4(f) properties. Alternatives 4 and 7 affect the least number of 4(f) recreational facilities. Alternative 3A affects the least number of 4(f) historic resources. Alternative 4 will have the least overall net harm to Section 4(f) resources in the study area.

Based on the comparative analysis of the Build Alternatives, Alternative 4 has been identified as the Preferred Alternative in this FEIS. Final alternative selection will not be made until public comments on the FEIS have been fully evaluated. The selected alternative will be identified in the Record of Decision (ROD) that will be issued by FHWA. The city councils for each of the project area cities (Draper, Riverton, Sandy, and South Jordan) and the Salt Lake County Council have all passed resolutions in favor of Alternative 4. Draper's resolution is contingent on UDOT securing funding to concurrently complete both the interchange and the river crossing. South Jordan's resolution requested that UDOT re-stripe 10600 South to accommodate two additional travel lanes if necessary, rather than widening the roadway between Jordan Gateway and Redwood Road.

### **Permits and Other Actions**

The proposed action involves impacts to resources regulated by state and federal agencies with jurisdiction. Coordination with these agencies has occurred during the development of the project. As a result of this coordination, the following permits or actions would be required:

**Table ES-1.  
Impact Summary Table\***

Alternative	No Build	Alt 1	Alt 3A	Alt 4	Alt 7
<b>Mobility Improvements (Year 2030 p.m. peak conditions, 5 to 6 p.m.)</b>					
Critical intersections at or over capacity (#)	7	4	5	4	5
I-15 ramps/segments at or over capacity	1	5	5	0	5
Interchange areas at or over capacity	2	0	0	0	0
Travel time reduction over No Build (overall study area)	N/A	28.6%	28.2%	30.7%	21.4%
Travel time reduction over No Build (to the Interstate)	N/A	9.5%	16.7%	22.2%	5.6%
<b>Economic Development Benefits</b>					
Estimated additional retail sq ft over No Build	N/A	856,000	0	1,388,000	825,000
Estimated additional sales tax revenue over No Build	N/A	\$2,996,000	\$0	\$4,683,000	\$2,887,500
<b>Right-of-Way Acquisitions and Relocations (includes Historic properties)</b>					
Home relocations (#)	0	60	34	26	31
Business relocations (#)	0	16	16	0	2
<b>Wetlands</b>					
Wetlands impacts - jurisdictional acres (total acres)	0	0.28 (0.68)	0.01 (0.37)	0.26 (0.57)	0.26 (0.64)
<b>Noise Impacts</b>					
Receptor dwellings at or over the Noise Abatement Criteria**	148	258	181	255	253
Receptor dwellings that could achieve 5dBA or greater mitigation	0	72	27	29	39
<b>Section 4(f) Property Impacts</b>					
Section 4(f) historic resource impacts – parcel take (#)	0	6	3	3	3
Section 4(f) historic resource impacts – strip take (#)	0	26	14	15	20
Section 4(f) recreation/wildlife resource impacts (#)	0	5	4	2	2
<b>Construction Costs</b>					
Preliminary cost estimate (million \$)	0	208	167	122	150

\* Highlighted boxes indicate best build option for criteria

\*\* Includes substantial noise increases of 10 dBA or more

#### Stream Alteration Permit

If alterations are to be made to the Jordan River bed or bank, or for alterations of any other streams, a Stream Alteration Permit is required from the Utah Department of Natural Resources, Division of Water Rights, which would also be subject to approval by the U.S. Army Corps of Engineers (Corps).

#### Flood Control Permit

The Jordan River, Midas Creek, Butterfield Creek, East Jordan Canal, Jordan and Salt Lake Canal, South Jordan Canal, Utah and Salt Lake Canal, and the Utah Lake Distributing Canal are all countywide flood control facilities. Construction of bridges, culverts, channel improvements, etc., would be considered modifications to the facilities and would require a Flood Control Permit from Salt Lake County. In addition, the canal companies may require separate agreements or permits for work done on their canals.

#### FEMA Permit

All of the bridge configuration options investigated as part of the hydraulics study resulted in less than one foot of increase to the 100-year floodplain water surface elevation, which can be characterized as a minor impact. Regardless, Federal Emergency Management Agency (FEMA) coordination and permitting will be required since the bridge options encroach into the Jordan River's regulatory floodway. All bridge options had bridge piers and abutments located within FEMA's regulatory floodway.

Structure crossings will be sized to meet UDOT drainage criteria, FEMA requirements outlined in 44 CFR, and any additional requirements outlined in 23 CFR 650. A one-foot maximum rise in water surface elevation for the one percent chance flood is allowed by all of these requirements; however, prudent design may dictate a lesser rise. In cases where these requirements cannot be met, a formalized Conditional Letter of Map Revision and Letter of Map Revision would be required by FEMA.

#### Clean Water Act Section 404 Permit

Either an Individual or Nationwide permit is required for activities involving the discharge of dredge or fill material into "waters of the United States" including wetlands. The permit program is jointly administered by the Corps and the U.S. Environmental Protection Agency (EPA). In Utah, the permit program is a cooperative effort between the State Division of Water Rights and the Corps.

#### Easement for Crossing Jordan River

The bed of the Jordan River is considered State sovereign land, and is managed by the State Division of Forestry, Fire, and State Lands (DFFSL) in the Department of Natural Resources. An easement must be obtained from the DFFSL for any river crossings or stream alterations.

#### UPDES Storm Water General Permit for Construction Activities

A Utah Pollutant Discharge Elimination System permit would be required if a construction project disturbs one acre or more of land. The permit is obtained by preparing a Storm Water Pollution Prevention Plan and Notice of Intent for the State Department of Environmental Quality, Division of Water Quality. The UPDES permit satisfies federal requirements for discharges of stormwater.

### ***Regulatory Compliance***

The planning, agency coordination, public involvement, and impact evaluation for the project have been coordinated according to the National Environmental Policy Act, the Clean Water Act, the Clean Air Act, the Farmland Protection Policy Act, Executive Order 11990 on Wetlands Protection, Executive Order 11988 on Floodplain Protection, Executive Order 12898 on Environmental Justice, the Fish and Wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, Section 4(f) of the Transportation Act of 1966, Section 6(f) of the Land and Water Conservation Fund Act of 1965, and other state and federal laws, policies, and procedures for environmental impact analyses and preparation of environmental documents.